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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,776	12/20/2001	Keith Billings	693-020con	2871

7590 06/17/2004
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EXAMINER

TRAN, THUY V

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/027,776

Applicant(s)

BILLINGS, KEITH

Examiner

Thuy V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 04/02/2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is a response to the Applicant's amendment submitted on April 2nd, 2004. In virtue of this amendment, claims 1-8 are currently presented in the instant application.

Drawings objection

1. The replacement sheets of drawings received on April 2nd, 2004 are not accepted since Fig. 1 contains a misspelled reference character "TRANSFORMER CENTER TOP". It should be corrected as --TRANSFORMER CENTER TAP--.
2. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections/ Minor Informalities

3. Claims 1-8 are objected to because of the following informalities:

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Claim 1, line 1, "At least one" should be changed to --A-- (since nowhere in the submitted specification recites more than one ballast);

Claim 1, line 2, "a" should be changed to --at least one--;

Claim 2, line 1, "apparatus" should be changed to --ballast circuit--;

Claim 3, line 1, "apparatus" should be changed to --ballast circuit--;

Claim 4, line 1, "apparatus" should be changed to --ballast circuit--;

Claim 5, line 1, "apparatus" should be changed to --ballast circuit--;

Claim 6, line 1, "apparatus" should be changed to --ballast circuit--;

Claim 7, line 1, "apparatus" should be changed to --ballast circuit--; and

Claim 8, line 1, "apparatus" should be changed to --ballast circuit--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fig. 1 of the Applicant's Admitted Prior Art (AAPA) in view of Maheshwari (U.S. Patent No. 5,424,614).

With respect to claims 1 and 2, Fig. 1 of AAPA shows a ballast circuit for supplying AC voltage and current to gas discharge lamps [181, 182] mounted in a troffer [183] upon an application of DC voltage and current, wherein the troffer [183] has a ground connection (see Fig. 1 of AAPA); the ballast circuit comprises (1) a transformer [101], which includes a first

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[111] and a second [112] primary windings, (2) first [131] and second [132] transistors; each having base, collector and emitter terminals; wherein the base terminal of each of the transistors [131, 132] is coupled to a drive terminal of the second primary winding [112], (3) a constant current flow network [154] which is coupled to the drive terminal so as to maintain the circuit in an oscillating mode, and (4) a current supply source [Ic] which is coupled to the troffer ground connection; wherein the first primary winding [111] is configured to be coupled across the lamps [181, 182]. Fig. 1 of AAPA further shows a capacitor [162, 163] having a capacitance at a first end of [181, 182] relative to the transformer [101]. However, Fig. 1 of AAPA does not show a capacitor with its capacitance at a second end of the lamps [181, 182] and the capacitances of the capacitors are equal.

Maheshwari discloses, in Fig. 3, a ballast circuit having a capacitor [64] including a capacitance at a first end of a lamp [62] and a capacitor [66] including a capacitance at a second end of the lamp [62]. Maheshwari does not teach that the capacitances of the two capacitors [64, 66] be equal. However, this difference is not of patentable merits since, upon desirability or a particular application, the values of the capacitances can be accommodated to facilitate the control of the potential power supplied to the lamp(s) and such an accommodation of the capacitances involves only routine skill in the art.

Consequently, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the ballast circuit of Fig. 1 of the Applicant's Admitted Prior Art (AAPA) by additionally configuring at the second end of the lamp a capacitor to avoid a high surge current during start up or when the lamp is removed since such an arrangement of the capacitor for the stated purpose has been well known in the art as evidenced by the teachings of

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Maheshwari (see col. 3, lines 37-39). Furthermore, to arrange the two capacitors of such a circuit arrangement of the combination of Fig. 1 of AAPA and Maheshwari with the same value of capacitance to facilitate the control of the voltage /current supplied to the lamp would have been deemed obvious to a person skilled in the art of electric lamps.

With respect to claim 3, Fig. 1 of AAPA shows that the ballast circuit further comprises a DC supply voltage source [190], which is coupled to the transformer [101] for supplying a variable DC supply voltage.

With respect to claim 4, Fig. 1 of AAPA shows that the current supply source [Ic] is a positive supply line of the DC supply voltage source.

With respect to claim 5, Fig. 1 of AAPA shows that the positive supply line of the DC supply voltage source is further coupled to the drive terminal via a resistor (which is connected to [151]) for providing start-up current.

With respect to claim 6, Fig. 1 of AAPA shows that the positive supply line of the DC supply voltage source is further coupled to a center tap terminal [105] of the first primary winding [111, 112].

With respect to claim 7, Fig. 1 of AAPA shows that the DC supply voltage source has negative and positive supply lines, and that the ballast circuit further comprises (1) a capacitor [192 or 193] which is coupled to and disposed between the negative and positive supply lines, and (2) an inductor [153] which is disposed in the negative supply line; wherein the ballast circuit is configured to reduce a current flow (via [151]) in the positive line.

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With respect to claim 8, Fig. 1 of AAPA shows that the constant current flow network [154] further comprises an inductor [152] which is coupled in series with a resistor [142] and a diode [171] which is coupled to the drive terminal of the second primary winding [112].

Double Patenting Rejections

6. *The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).*

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-8 are rejected under the judicially created doctrine of double patenting over claims 1-8 of U. S. Patent No. 6,366,029 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: (i) A ballast circuit for supplying AC voltage and current... a current supply source coupled to said troffer ground connection (as recited in claim 1); (ii) The apparatus of claim 1, ...by a capacitor (as recited in claim 2); (iii) The apparatus of claim 1... a variable DC supply

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voltage (as recited in claim 3); (iv) The apparatus of claim 3... said DC supply voltage source (as recited in claim 4); (v) The apparatus of claim 4 ... for providing start-up current (as recited in claim 5); (vi) The apparatus of claim 5 ... said first primary winding (as recited in claim 6); (vii) The apparatus of claim 3... relative to said other supply line (as recited in claim 7); and (viii) The apparatus of claim 1... said second primary winding (as recited in claim 8).

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Remarks

8. With respect to the Specification Objections set forth in the Office Action mailed 01/02/2004, the Applicant has amended the submitted specification appropriately as pointed out by the Examiner. Therefore, these objections are hereby withdrawn.

9. The Applicant is noted that a “*Claim Rejections - 35 USC § 103*” section is provided herein with the rejections over Double Patenting for a complete action. Consequently, the terminal disclaimer filed 04/02/2004 has not been approved yet.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

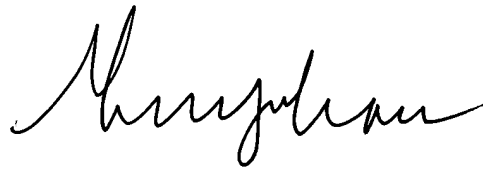
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuy V. Tran
Examiner
Art Unit 2821

T.T.
06/09/2004

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over the printed name and title.